STATUS OF PLANS FOR 1990 CENSUS

HEARING

BEFORE THE

SUBCOMMITTEE ON CENSUS AND POPULATION

OF THE

COMMITTEE ON POST OFFICE AND CIVIL SERVICE HOUSE OF REPRESENTATIVES

ONE HUNDREDTH CONGRESS

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STATUS OF PLANS FOR 1990 CENSUS

TUESDAY, SEPTEMBER 27, 1988

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON CENSUS AND POPULATION,
COMMITTEE ON POST OFFICE AND CIVIL SERVICE,
Washington, DC.

The subcommittee met, pursuant to call, at 9:30 a.m., in Room 311, Cannon House Office Building, Hon. Mervyn M. Dymally (chairman of the subcommittee) presiding.

Mr. DYMALLY. Good morning.

Today, the Subcommittee on Census and Population will hold its final oversight hearing of the 100th Congress on the status of plans for the 1990 census.

I am pleased to have two very capable public servants as our witnesses for this hearing. Dr. John Keane, Director of the Census Bureau, and Mr. Gene Dodaro, Associate Director of the General Government Division of the GAO.

I consider this hearing critical to the preparations for the upcoming census because when the 101st Congress convenes and reorganizes, it will be only about a year away from census day.

Therefore, it is important that any foreseeable problems are identified and addressed before the Congress adjourns this year.

Today, the subcommittee will look into the evaluation of the 1988 census dress rehearsal which took place in St. Louis last March. We hope to hear about the success or failure of any new computer equipment, the extent of community participation and cooperation, problems encountered by enumerators and other results which will help the Census Bureau plan better for the 1990 census.

The subcommittee will also look into the promotion and outreach programs and pre-listing activities of the Census Bureau. Of particular interest is how local and grassroots organizations are involved in these processes.

The upcoming census is unique in that it uses new technological innovations and follow-up procedures which promise improvements in the accuracy of the census. The subcommittee will be looking into these areas of the census as well.

Trusting the expertise of our witnesses, I am confident that they will freely raise any other issues they foresee as potential snags in the census.

On that note, I would like to conclude by expressing my appreciation to Dr. Keane and Mr. Dodaro for all the assistance they have provided my subcommittee during my tenure as chairman.

It has been a very good relationship and I hope that we can continue it next year.

With that said, I would like to once again welcome our witnesses. We look forward to your testimony.

Our first witness is Mr. Dodaro.

Mr. Dodaro, you may identify your witnesses.

STATEMENT OF GENE DODARO, ASSOCIATE DIRECTOR, GENERAL GOVERNMENT DIVISION, GENERAL ACCOUNTING OFFICE, ACCOMPANIED BY JACOB KAUFMAN, SENIOR GAO EVALUATOR; AND SHERRIE RUSS, GAO EVALUATOR

Mr. DODARO. Good morning, Mr. Chairman.

With me are Jack Kaufman, who has supervised GAO census work for many years and Sherrie Russ, who is overseeing our work on address list development.

With your permission, I would like to have our full statement entered into the record and briefly summarize our major points.

Mr. DYMALLY. Without objection, so ordered.

Mr. DODARO. We are pleased to appear here today to discuss our observations on the Bureau's preparations for the 1990 census. My comments today reflect the preliminary results of our reviews of the dress rehearsal and the development of address lists for suburban and rural areas, known as prelisting.

I also want to highlight certain concerns we have about potential problems in obtaining workers for census operations and escalating census costs.

The dress rehearsal and the pre-list activities are important because they provide early indications of difficulties the Bureau might have in later phases of the census. They also provide a measure of the Bureau's success in implementing new automation procedures for 1990 to overcome problems experienced in the 1980 census.

For example, minicomputers and automated systems will be used to check in questionnaires and generate census maps, replacing error-prone procedures used in 1980. Also, to improve the timeliness and quality of data, census information will be processed as it is being collected, rather than waiting until field offices complete all data collection, as was done in 1980.

Generally, the Bureau has achieved some key objectives for the dress rehearsal and the pre-list. The dress rehearsal is being completed generally on schedule and within budget. Important procedural changes also work well for the most part. Early pre-list activities have shown that the automated systems are generating higher quality maps than in 1980.

The Census Bureau is making progress, but three key areas warrant attention to achieve a well-managed and cost-effective census. The Bureau needs to first: continue its efforts to prepare a contingency plan in the event that the new minicomputer system does not work as intended; second, consider developing geographic and market wage scales and alternative strategies to help attract and retain a sufficient temporary work force; and third, prepare a plan for handling potential budget shortfalls and make decisions as early as possible to minimize the need for last-minute cutbacks, as occurred in 1980.

Let me discuss each of these areas in a bit more detail. First, the minicomputers. Because of delays in procuring the minicomputers due to late decisionmaking, they were not available at the start of the dress rehearsal. Although the minicomputers were used in later phases, such as generating management information reports, there was not sufficient time to adequately develop and test software and correct design errors.

Consequently, certain reports were inaccurate; the managers did not use them, reverting to manual records instead. This could have broad implications nationwide if the software problems are not fully resolved before the start of the labor-intensive enumeration phase for the 1990 census operations.

In our June 1988 report on the minicomputer procurement, we recommended that the Bureau develop a contingency plan in the event that the new systems do not operate as intended. Such efforts are now under way, as well as additional testing of the software.

Now, let me turn to one of the Bureau's major management challenges; that is, recruiting and retaining a sufficient number of competent temporary employees. This was a significant problem in the 1980 census. For example, at the height of the 1980 census, the Bureau had only 70 percent of the required number of enumerators. For 1990, over 300,000 temporary employees will be required to staff an estimated 500 temporary offices nationwide. Obtaining the best available work force and training them thoroughly is very important to the integrity of the census.

For example, our observations of early pre-list activities showed that some enumerators were not following procedures that are designed to ensure the quality of census data.

During the initial pre-list phase, the Bureau also experienced difficulties in obtaining and holding a sufficient number of enumerators. Low employment rates in some areas and the Bureau's relatively low hourly wage scale may be adversely affecting its ability to attract needed temporary employees.

Such difficulties may foreshadow problems for subsequent operations. The Bureau may have to develop geographic and market wage scales and options for increasing the supply of temporary workers.

One example includes removing the disincentives for those currently receiving Federal retirement benefits to accept temporary census employment.

The last point I want to focus on is the escalating cost of the taking of the census. Decennial housing unit costs in 1980 dollars; that is, already adjusted for inflation, have increased dramatically. In the 1970 census, the unit costs was almost $7. In the 1980 census, it was slightly over $12. For 1990, it is estimated to exceed $18 per household.

We believe the census as currently planned will cost about $3 billion after adjusting for expected inflation through the 1990 census cycle and considering the 1980 experience.

Obtaining additional money may be more difficult, given the current budget deficit. In 1980, the Bureau needed $50 million in supplemental appropriations and had to take actions which reduced data quality and slowed data dissemination.

Controlling costs without undermining the quality of census operations will require timely decisionmaking. To better position itself for 1990, the Bureau planned to develop a contingency plan identifying actions needed in the event of budget shortfalls, but it has not yet completed that effort. The Bureau should make this a priority at this time while some flexibility remains.

Mr. Chairman, that concludes my statement and we would be pleased to respond to any questions.

[The statement of Mr. Dodaro follows:]

STATUS OF THE 1990 DECENNIAL CENSUS

SUMMARY OF STATEMENT BY
GENE L. DODARO
ASSOCIATE DIRECTOR
GENERAL GOVERNMENT DIVISION

A decennial census is a massive undertaking with unique management requirements. For the 1990 Decennial about 460 offices nationwide will collect and process population and housing data from over 100 million households. Over 300,000 temporary workers will have to be recruited, trained, and managed.

To overcome problems experienced in the 1980 census, the Bureau is introducing new methods for 1990, including greater use of automation. For example, automated systems will be used to check in questionnaires and generate census maps, replacing error-prone manual procedures used in 1980. Also, to improve the timeliness and quality of data, census information will be processed as it is being collected, rather than waiting until field offices complete all data collection, as was done in 1980. Such improvements are positive strides but also represent significant management challenges for the Bureau.

GAO has been monitoring the 1988 dress rehearsal, the Bureau's final opportunity to refine 1990 procedures, and the development of the address list for suburban and rural areas, the first major field activity for the 1990 census. Both are achieving some key objectives. However, three critical areas warrant special attention to achieve a well-managed, cost-effective census.

-- Some automated systems in the dress rehearsal did not function as intended because late decisionmaking and delays in procuring computer equipment reduced the time to develop and test software and correct design errors. GAO has recommended that the Bureau develop a contingency plan in the event that new systems do not operate as intended. Such efforts are now underway.

-- Staffing difficulties experienced during the initial phase of the address list development could foreshadow problems for subsequent operations. The Bureau may have to develop geographic and market wage scales and alternative strategies for increasing the supply of temporary workers.

-- The Bureau's cost estimates are escalating. The 1990 census could cost about $3 billion. In 1980, the Bureau ran out of money and needed $50 million in supplemental appropriations. This also prompted actions which reduced data quality and slowed data dissemination. To avoid a recurrence in 1990, the Bureau needs to prepare a plan for handling potential budget shortfalls and make decisions as early as possible.

Mr. Chairman and Members of the Subcommittee:

I am pleased to appear today to discuss our observations on the Bureau's preparations for the 1990 census. My comments today reflect the preliminary results of our reviews of the 1988 dress rehearsal and the development of address lists for suburban and rural areas, known as prelisting, as well as certain concerns we have about potential staffing problems and escalating census costs. My comments also are based on our previous reviews of the 1980 census and the Bureau's automation efforts for the 1990 census.

The dress rehearsal represents the Bureau's final opportunity to refine 1990 procedures. It began in February 1987 and is being done at three locations: St. Louis, Missouri; East Central Missouri; and Eastern Washington. The data collection activities for the dress rehearsal have been completed, but final tabulations and evaluations are ongoing. Our field work was done at Bureau headquarters, the Kansas City processing office, and at the three dress rehearsal sites.

The prelist activity represents the first major field activity for the 1990 census. It started in June 1988 and will continue for approximately 1 year. Our field work is being done at Bureau headquarters, the Baltimore and Kansas City processing

offices, and in 3 of 12 regional census areas with high workloads in the early phases of prelist.

DRESS REHEARSAL ON SCHEDULE
BUT NOT A COMPLETE TEST

First, let me discuss the dress rehearsal, which was designed to provide a full-scale test of the systems and procedures to be used in the 1990 census, particularly new automated systems to replace error-prone manual systems used in 1980. Such systems and procedures include: processing census data as it is collected (concurrent processing) rather than waiting until field offices complete all data collection activities; and the use of a new minicomputer system for producing and updating maps, checking in questionnaires, keying address information, and generating management information reports. Such improvements are positive strides but also represent significant management challenges for the Bureau.

Thus far, the Bureau is completing the dress rehearsal activities generally on schedule and within budget. Key procedural changes, such as concurrent processing, worked well for the most part. However, because of delays in procuring the minicomputers due to late decisionmaking, they were not available at the start of the dress rehearsal for keying addresses and updating maps.

The minicomputers were used in later phases of the dress rehearsal for checking in questionnaires and generating management information system reports. The automated questionnaire check-in procedure appeared to have worked well, but the Bureau had problems with some of the management information system reports. The Bureau did not have sufficient time to adequately develop and test software for these applications because of the delays in acquiring the minicomputers. As a result, certain management information system reports were inaccurate and were not used. For example, reports intended to assist regional census managers in centralized hiring and monitoring employee production were not accurate or timely. As a result, managers did not use them, reverting to manual records instead. This could have broad implications nationwide if the software problems are not fully resolved before the start of the labor intensive enumeration phase of 1990 census operations.

In our June 1988 report, entitled Minicomputer Procurement Delays and Bid Protests: Effects on the 1990 Census (GAO/GGD-88-70), we discussed our concerns about adequate software development and the risks associated with using software before it is fully tested. We recommended that the Bureau develop a formal contingency plan in the event the minicomputers do not operate properly. The Bureau agreed and is currently preparing a contingency plan and doing system tests.

SOME PROBLEMS IN PRELIST

Let me now turn to the prelist, the first major field activity for the 1990 census. Accurate and complete address lists are important to the quality of the census because they help ensure that questionnaires are delivered to all households. They also serve as a control list for identifying and locating households that do not return questionnaires.

The Bureau generally has relied on two methods of developing its initial address lists. For urban areas, commercial vendor mailing lists are purchased. For rural and suburban areas, commercial lists cannot be used because mailing addresses frequently do not identify a housing unit's specific geographic location. As a result, in these areas an estimated 40,000 census enumerators will travel or canvass all streets and roads, list the mailing address of every living quarter, and spot the location of the housing unit on a census map. The map spotting allows the Bureau to physically locate the units for possible follow-up work and to accurately tabulate population counts at the local levels.

For the 1980 census, delays in map production, difficulties in using census maps, and problems in retaining staff contributed to delays in completing the prelist. As a result, the Bureau cancelled a planned independent Postal Service mailing address

check. To help compensate for the missed procedure, at the last minute, the Bureau recanvassed some of the rural portions of the country, which included approximately 15 million households. The Bureau estimated that about 105,000 housing units were added to the address list from this procedure at a cost of $10.3 million. The housing unit cost for each addition was about $98, making it one of the least cost-effective procedures in the 1980 census.

To prevent problems from recurring in 1990, the Bureau (1) automated map production to improve the quality of census maps and (2) planned to begin the prelist a year earlier than it had in 1980. Our review to date of initial prelist activities has found that these initiatives have met with mixed results.

The new automated geographic support system appears to be generating higher quality maps than those used in 1980. However, Bureau officials acknowledge, and our field observations show, that some road information is outdated. While this has caused problems for some enumerators, overall they were able to use the maps.

Although maps were usable, their late production contributed to the Bureau's decision to delay the start of the 1990 prelist by 4 months--from February 1988 to June 1988. The Bureau originally had planned to prelist approximately 45 million housing units for the 1990 census. However, late map production,

coupled with the Bureau's concern about the ability to develop good mailing addresses for some rural areas, caused the Bureau to defer the prelist of 11 million housing units to the fall of 1989. For these units, the Bureau, rather than the Postal Service, will deliver the questionnaires. In addition, the Bureau decided not to prelist 2 million housing units, opting instead to enumerate them using its traditional door-to-door canvass enumeration procedure. However, despite the delay and changes in its original plans for prelisting, the Bureau is still generally ahead of its 1980 pace because of its decision to begin the prelist activity 1 year earlier.

Another change the Bureau made to improve prelist operations was to provide more training. It increased 1990 prelist enumerator training from the 1 day given in 1980 to 3 days. The 1990 prelist training includes practice exercises to simulate field conditions and provides field training. Effective training is especially important in managing the temporary workforce used for prelisting.

Of the 25 prelist enumerators we observed, 19 believed that the training had prepared them for their assignments. However, our field observations of the 25 enumerators and review of quality assurance documents disclosed that some did not always follow procedures that could affect the quality of the census. This is seen in the following examples.

-- Seven of the 25 enumerators we observed did not ask every household whether there were other living quarters located on the property. Failure to ask this question could result in less than adequate census coverage because housing units that are hidden from view would not be prelisted and might ultimately be excluded from the census counts. The Bureau's evaluation of the coverage of housing units in the 1980 census found that almost 2 percent of occupied housing units in prelist areas were not counted.

-- Of the 25 enumerators, 8 did not follow procedures for accurately map spotting housing units. Six enumerators waited to map spot several units at a time and two spotted units in the wrong block. Inaccurate map spotting could affect the Bureau's delivery of questionnaires and ability to locate units that do not mail back questionnaires. Additionally, while not affecting total population counts, inaccurate map spotting may distort counts at lower geographic levels.

-- The Bureau's quality assurance procedures require reconcilation of differences between sample address listings developed by temporary employees, called advance listers, and those listings developed by prelist enumerators. This reconciliation is used to evaluate the performance of the enumerators' work. Of the 68 quality assurance documents we

reviewed, 14 indicated that supervisors did not complete the reconciliation as required. For those documents in which the reconciliation appeared to be correctly done, 149 differences were identified, 140 of which, or almost 94 percent, were attributable to advance listers. On the basis of our analysis, we are concerned about using the advance listing procedure as a standard to measure the accuracy of enumerators' work. This analysis raises concerns about whether the Bureau is underestimating the total number of listing errors and whether this procedure is cost effective.

We recognize that the Bureau cannot make significant changes in its training programs for the 1990 prelist at this time. However, regional census managers should stress to field managers who train and supervise enumerators the importance of emphasizing such procedures as asking the question on additional living quarters, accurately map spotting housing units, and thoroughly reconciling differences identified during quality assurance checks. Also, in the long run, the Bureau should evaluate the effectiveness of using the advance listing technique as a quality assurance measure for evaluating the completeness and accuracy of the enumerators' address listings.

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RECRUITING AND STAFFING PROBLEMS

One of the Bureau's major management challenges in taking a decennial census is acquiring and retaining a sufficient number of competent temporary employees. At the height of the 1980 census operations, the Bureau had only 70 percent of the required number of enumerators. This was particularly a problem in the New York, Dallas, Philadelphia, and Denver regions. High turnover rates traditionally have affected the Bureau's ability to maintain full staffing. For example, Bureau officials stated that personnel turnover rates for the 1970 census were between 20 to 25 percent. For the 1980 census, the Bureau reported that turnover was a major problem, particularly in inner-city district offices where the turnover rate ranged from 37 to 74 percent. In the prelist operation for 1980, the turnover rate was about 34 percent.

There are early indications that the Bureau is having recruiting and staffing problems in the 1990 prelist. Our review of July 1988 recruiting reports for the 10 regional census offices having activity for the first phase of prelist, involving 18 states, indicated difficulties in obtaining and holding a sufficient number of enumerators in areas of 11 states. This can be seen in the following examples.

-- Shortfalls in the required number of full-time enumerators occurred in some areas of the Philadelphia region, such as Maryland and Delaware. In these two states, the Bureau was able to hire only 245 of the 314 enumerators needed for the first phase of prelist. To help compensate for the shortfall and meet production goals, the Bureau hired part-time employees and paid overtime to high performing enumerators.

-- Parts of Hawaii had less than half the required staff and other parts had just enough enumerators, allowing no margin for turnover.

-- In the Charlotte region, the turnover rate in South Carolina and Kentucky approached 50 percent during the first phase of the prelist, which was significantly higher than expected.

-- For Maine and Vermont, states in the Boston region, the Bureau only met 79 and 78 percent, respectively, of its recruiting goals.

Because complete information is not yet available, we are unable to determine the specific causes of the Bureau's recruitment and staffing problems. However, discussions with headquarters and regional staff responsible for recruitment and staffing and a review of initial recruiting reports suggest that low unemployment rates in some areas and the Bureau's relatively low

hourly wage scale ($5.50) may be adversely affecting its ability to attract and compete for needed temporary employees.

Problems in recruiting and retaining a sufficient number of workers for prelist may foreshadow problems for subsequent 1990 census operations. The Bureau will require over 300,000 temporary employees to staff the planned 469 temporary offices, for collecting and processing population and housing data from over 100 million households. Increases in the minimum wage scale, if enacted, could increase the attractiveness and competitiveness of other employment opportunities in some areas, relative to the Bureau's employment. This could further compound recruitment problems. We understand that the Bureau recognizes this problem and is considering options for possible wage scale adjustments.

In addition, the Bureau's hourly wage scale does not reflect geographic differences in the cost of living and market wage rates, which may hamper recruiting efforts in some areas. While geographic wage scales pose administrative complexities, the Bureau may need to reevaluate this option so that it may be more competitive in some areas of the country.

Recognizing that it faces problems in obtaining sufficient numbers of temporary employees, the Bureau considered a legislative initiative to remove some of the disincentives for

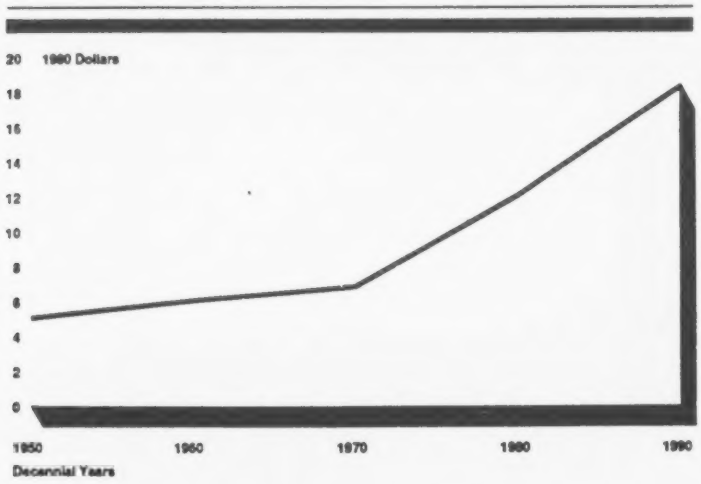
temporary employment for those who are currently receiving federal retirement benefits. In June 1987, the Bureau submitted a legislative proposal to the Department of Commerce to enable federal civilian and military retirees to work as census employees without a reduction in retirement benefits. While the Bureau mentioned that a number of federal retirees inquired about temporary employment in 1980, it did not provide statistics on how its proposal would increase the labor supply.

In responding to the Bureau's initiative, Commerce said that the Bureau had not adequately justified its position. It suggested that the Bureau either define the unique job skills needed for decennial jobs that federal retirees are likely to possess, and/or provide estimates of the proposed legislation's effect on the pool of potential applicants as compared to the number of positions. In April 1988, the Bureau decided that it did not have additional justification and withdrew its request. We believe that in light of the difficulties encountered in the prelist and past census experience, the Bureau should more aggressively explore this or other viable options as a means to increase the available labor supply for 1990. However, decisions on this initiative should be reevaluated soon so that Congress will have time to enact any legislation it deems appropriate.

ESCALATING CENSUS COSTS

Controlling costs without adversely affecting the quality of census operations is another management challenge that will require timely decisionmaking. Decennial census costs have increased dramatically over the past few decades. As shown below, the per housing unit cost of the census (in 1980 dollars) has increased from $5.04 for the 1950 census, to $12.10 for the 1980 census, to a current estimate of $18.28 for the 1990 census.

Per Housing Unit Cost Has Increased Dramatically Since 1970



Per housing unit costs are in constant 1980 dollars

For the 1980 census, cost estimates rose significantly during the 5 years preceding actual operations. For example, in 1975 the Bureau estimated the 1980 census would cost $450 million, in 1977 the estimate was $565 million, and in 1980 the estimate was $1 billion. The 1980 census eventually cost about $1.1 billion.

Similarly, cost estimates for the 1990 decennial have escalated in recent years. The Bureau initially planned to take the 1990 census without increasing the inflation-adjusted per housing unit cost of the 1980 census. Using this objective, the Bureau estimated in 1985 that the 1990 census would cost $1.8 billion. In 1986, however, the Bureau revised its estimate to $2.6 billion--a 44 percent increase over the 1985 estimate. The 1986 estimate incorporated additional costs for some automated equipment, an expected lower mail response rate than in 1980, changes in procedures designed to maintain the quality of census data, and revised inflation data. Adjusting for expected inflation through the 1990 census cycle and considering the 1980 census experience, we believe the census as currently planned will cost about $3 billion.

Obtaining additional money to meet escalating census costs may be more difficult given the current budget deficit. Therefore, the Bureau needs to be prepared in the event it does not receive sufficient money to take the census as currently designed. In 1980, the Bureau ran out of money and needed $50 million in

supplemental appropriations. This also prompted actions which reduced data quality and slowed data dissemination. For example, the Bureau reduced the coding staff by approximately 50 percent for about 3 months, contributing to about a 1-year delay in the publication of data on population characteristics.

To better position itself for 1990, the Bureau planned to develop a contingency plan identifying actions needed in the event of budget shortfalls, but it has not yet completed that plan. The Bureau should make this a priority at this time, while some flexibility remains. Once the plan is completed, the Bureau needs to closely monitor its budget situation and make decisions as early as possible to prevent or minimize the need for last minute cutbacks as occurred in 1980.

Mr. Chairman, this concludes my statement. I would be pleased to respond to questions.

Mr. DYMALLY. Thank you very much.

I was somewhat surprised to find out that the salary scale at the Census Bureau is so low that it is difficult to attract very, very capable people on a temporary basis.

Was that part of your findings in terms of the salaries?

Mr. DODARO. Yes, it was. What we noticed is the hourly wage scale, which is $5.50 per hour, during the early pre-list activities didn't appear sufficient to attract the number of workers that they needed to conduct those activities.

Now, the first phase of the pre-list is being conducted in about 18 States. Our discussions with the recruiting people and our reviews of early recruiting reports showed that the Bureau had problems in parts of 11 of those 18 States attracting a sufficient number of people. For example, in Delaware and Maryland, they only were able to hire 245 of 314 enumerators that they needed for that area. They also had high turnover problems, which has been characteristic of the census before.

Mr. DYMALLY. I suspect that situation also exists with middle management people because some of the salary scales were lower than that being paid in the public or private sectors, for instance, in the county or the State.

Mr. DODARO. I would suspect there would be a problem there as well.

Mr. DYMALLY. In your testimony, you reported that the Bureau, instead of the Post Office, is going to deliver the questionnaires. Do you foresee a problem there in delivery, especially in the rural areas?

Mr. DODARO. It is always important for the Bureau to work well with the Postal Service and they go through a number of checks. Particularly in the rural areas, there is always a potential for a problem there.

One of the things the Bureau is doing differently for 1990 is in 11 million households, they are going to deliver the questionnaires themselves as opposed to using the Postal Service. This has several advantages and disadvantages.

On the advantage side, the Bureau claims they can't get good mailing lists for these units because during pre-listing, a lot of people weren't home. They have also been testing this type of method in a 1986 pre-test in Meridian, Mississippi, and also during a dress rehearsal. There have been some difficulties in using this method, however, and an evaluation of the Bureau study of the 1986 pretest showed that some housing units did not receive questionnaries using this method. Other households received two, and there were some gaps in coverage.

We see that one of the problems here is having to use temporary workers and it doesn't always provide the quality assurance checks that you have when the Postal Service delivers the questionnaires.

Mr. DYMALLY. It has just been brought to my attention that the Census Bureau cannot leave those questionnaires in the post box. They have to leave it at the door or——

Mr. DODARO. That is correct. That is another potential problem.

On the positive side, if people are at home, then they can make personal contact with the person and urge them to complete the questionnaire, but if somebody is not there, they cannot use the

mailbox under this delivery technique, so they either have to hang it on the doorknob or put it under the door or leave it in a screen door. On a negative side, this doesn't provide you a lot of assurance that the questionnaire was delivered, particularly since the Bureau is using temporary employees to do this function.

Mr. DYMALLY. On a political note, candidates know that one of the best ways to have their mail read is to send it through the Post Office. If you stick it on the door, it ends up in the trash can. That ought to be a concern. I hope the Bureau will address that when they come to testify.

Finally, you note that the Census Bureau is going to purchase some address lists from commercial enterprises. Are we certain that there is going to be some accuracy or is there any other way of assuring accuracy of those lists?

Mr. DODARO. The Bureau has really three types of checks it will go through with these commercial mailing lists that they are going to purchase for urban areas. They will go through a number of checks with the Postal Service, both early on after they have received the commercial lists, and then later as they get closer to the census.

They will also provide a summary of the lists for the local government officials and, in addition, they plan to go out and double-check the address list themselves; this is known as precanvassing. We have noted in the 1980 census that the urban commercial mailing lists, particularly for innercity areas, aren't always that accurate. There is a lot of activity going on there in terms of demolition, new construction and also there is not a tremendous financial incentive for vendors to continually update their lists for these areas.

But the Bureau does plan to go through a number of checks to try to improve its accuracy.

Mr. DYMALLY. Okay. Thank you very much, indeed.

Mr. DODARO. Thank you, Mr. Chairman.

Mr. DYMALLY. Dr. Keane.

STATEMENT OF JOHN G. KEANE, DIRECTOR, BUREAU OF THE CENSUS, ACCOMPANIED BY PETER A. BOUNPANE, ASSISTANT DIRECTOR, BUREAU OF THE CENSUS

Mr. KEANE. Good morning, Mr. Chairman.

Mr. DYMALLY. Good morning, indeed.

Mr. KEANE. I should like to start by acknowledging your kind sentiments in your testimony in talking about the cooperation that your subcommittee and the Census Bureau have had. I want you to know I was listening and we appreciate it.

With me is no stranger to——

Mr. DYMALLY. I never thought you listened when I had nice things to say.

Mr. KEANE. With me is no stranger to you and the subcommittee, Peter Bounpane, Assistant Director for Decennial Census at the Census Bureau.

Mr. Chairman, I will report today on the status of our 1990 census plans. Census day, I would remind you, is 550 days away and counting. But major plans are complete and we have begun

preparatory operations. One way to look at it is simply that the census is, indeed, under way now.

Taking a highly accurate census in a timely manner in such a complex and mobile society as ours is an acknowledged enormous challenge. I want you to know, though, that the Census Bureau is ready to meet that challenge. We have laid a solid foundation during the research and planning phase. The Census Bureau staff have demonstrated their motivation and dedication and I am confident that the 1990 census will be the best ever census.

I will review our successful accomplishments under the following headings: dress rehearsal, which you specifically mentioned in your letter of August 15; the 1990 census preparatory activities, including pre-list, which you also specifically mentioned; three, family of minicomputers; four, increased use of automation; five, TIGER; six, publicity and outreach; and finally, planned improvements in accounts.

On to number one, the dress rehearsal. We have conducted the most successful dress rehearsal ever, accomplishing about exactly what we set out to do. A dress rehearsal is the capstone, of course, of our planning efforts. It follows four years of consultations with data users and a series of formal tests of alternative procedures in questionnaire content.

More than 500,000 housing units and more than a million people were included in the three dress rehearsal sites. The dress rehearsal has proceeded smoothly. The data collection work has been completed, as has the review of census count by local officials.

Data processing continues on schedule. We have, as expected, identified various refinements to operations and systems, but that is why we conduct tests and dress rehearsals.

On to the second part, the 1990 census preparatory activities. The 1990 census preparatory activities are under way and we will complete them successfully. One of these is the compilation of a list of 100 million addresses. In February, we purchased addresses from commercial vendors for the more urban parts of the country. Now we are sending enumerators door to door to list addresses for small towns and more rural areas.

This is the operation we call pre-list. We will conduct a second wave of pre-list in the fall of 1989.

We have also begun the printing procurement, four cents a questionnaire, which will eventually number a quarter of a billion in all. To have enough time to prepare materials for the printer and to abide by the procurement schedule, we must have final questionnaire content by mid-October 1988.

Finally, with regard to preparatory operations, we have procured or are in the process of procuring space for our temporary offices. These will include 13 regional census centers, more than 450 district offices, and 7 data processing offices. In all, we will require about 6 million square feet of space for temporary offices to manage the 1990 census data collection and process.

Three, in 1987, we undertook and successfully completed the family of minicomputers procurement. This was the largest computer procurement in our history. In all, we will purchase 550 minicomputers, 520 of these for the Decennial Census and the rest for

our other programs. With this procurement, the Census Bureau entered the age of high tech.

Four, we have taken a giant step forward to make the 1990 census the most automated census ever. A new automated address control file will contain 100 million addresses. This automated file will allow us to check in questionnaires using high-speed laser sorters and minicomputers instead of by hand, as we did in 1980.

With this automated address control file, we can process census questionnaires on a flow basis. This will allow us to convert questionnaires to machine-readable form at least three months earlier than 1980. That should make it possible to get data products out sooner.

Among the other new ways that we will use automation in 1990 are to edit questionnaires, code write-in entries on the questionnaires, track work progress and cost and manage field recruiting and payroll operations in our district offices.

Five, we are implementing a new automated geographic support system called TIGER. The acronym stands for Topologically Integrated Geographic Encoding and Referencing. The TIGER system contains geographic information and maps in computer-readable form. This system is working now and has already produced maps for three-quarters of the 3,286 counties in the nation.

The development of this system is one of the most far-reaching Census Bureau activities. In addition to being a vital component of a successful 1990 census, the TIGER system will benefit all decennial economic, agricultural and government censuses and our current surveys. We plan to make TIGER system products available to data users. These products will have great significance for inventory, environmental, social, health, education and transportation plans. The TIGER system is an important national resource that will aid us for years to come.

Six, we have first-rate publicity and outreach plans to involve the American people in a successful 1990 census. Through the assistance of the Advertising Council, we are developing a national publicity program with special efforts made to appeal to hard-to-enumerate groups. The Mingo Group has already prepared advertising aimed at the black population and we used this in our dress rehearsal.

Especially impressive are the efforts planned for obtaining support from community organizations, churches and schools. As one example, we met on June 1, and recently, September 16th, with leaders of the Congress of National Black Churches, other black denominations and black fraternal orders. The Congress and other leaders have offered their strong support and cooperation for the 1990 census.

I might add that they are hard at work at drafting a national endorsement statement as well as a host of individual statements that each one of the subgroups can use in its individual area so that it will be customized to the census-taking in that area.

Also impressive are our outreach efforts to national, State and local officials and organizations. On October 18, we will hold in Kansas City, Missouri, the first of a series of regional meetings with elected officials to encourage their support for the 1990 census. This is in addition to our local review program, the Mayors'

Cooperation program and the American Indian Tribal and Alaskan Native Village Liaison program.

Those are all described in my written testimony.

Seven, we are concentrating our energy, attention and resources on efforts to improve the efficiency and accuracy of the 1990 census. We expect these efforts to produce the most complete counts ever. I have already discussed four of them: increased automation, the automated geographic support system, or TIGER, expanded promotion outreach and publicity, and increased joint participation between the Census Bureau and local officials.

Now I will mention three other important efforts to improve the count. First, we have built into the census process several new ways to increase the mail return rate. These include "reminder postcards," motivational inserts in the questionnaire packages and multi-lingual motivational flyers in English, Spanish and selected Asian languages.

Second, we are improving address lists compilation and questionnaire delivery procedures. This includes new listing procedures that will yield better apartment designations in multi-unit structures in urban areas. We are also introducing new procedures to increase the likelihood that a household receives its census questionnaire. One of these is direct delivery of questionnaires by census enumerators in some large public housing complexes.

Third, we are strengthening enumerator training, enumerator pay and enumerator management. Training will include more-by-doing exercises, rather than the more traditional reading and hoping that they will absorb all of that and practice it. We get them out soon to practice what they have learned before they are exposed to that much material.

Pay will be supplemented by additional payments for enumerators who are productive, who do good work and complete their assignments on schedule. Management will be strengthened by increasing the number of crew leaders and thus reducing the ratio of enumerators to crew leaders.

In 1980, the ratio was one crew leader to 12 enumerators. In 1990, we plan to have one crew leader for eight enumerators.

These efforts that I have described, and others, should help us retain and motivate our work force and improve the process' control overall. We know that it will be a challenge to recruit sufficient numbers of employees, particularly in areas with low unemployment and high wages. I and other Census Bureau staff are very concerned about this.

This is why we have given so much attention in our test censuses, our dress rehearsal and in our pre-list operation to examining alternatives to recruiting and paying workers.

We are implementing new means to recruit workers, including mass mailings in areas where recruitment lags and contacts with national organizations such as the American Association of Retired Persons.

We are also exploring the feasibility of implementing local pay raises. These would be in addition to our existing differential rates of about $5.50 an hour in rural and suburban areas and $6.00 an hour in urban areas.

Mr. Chairman, with this committee's continued support, together we can make the Decennial Census one that we can all take pride in.

We appreciate your continued strong interest in our plans for the 1990 census and look forward to your continuing review of our operations and our progress.

[The statement of Mr. Keane follows:]

DR. JOHN G. KEANE
DIRECTOR, BUREAU OF THE CENSUS

INTRODUCTION

Mr. Chairman, I will report to you today on the status of plans for the 1990 census.

Census Day for the 1990 census is April 1, 1990--550 days from now. But as I will describe shortly, major plans are complete and we have begun preparatory operations.

Today, I will discuss five topics: (1) planning and testing for the census, (2) address list compilation, (3) the census questionnaires and sample design, (4) space for census operations, and (5) planned improvements in the counts for the 1990 census.

PLANNING AND TESTING

One--planning and testing.

We are now completing our dress rehearsal, which is the dry run of planned census operations for 1990. We began formal planning for the 1990 census in October 1983. This early start has allowed us to conduct seven major tests, as opposed to the five we conducted prior to the 1980 census. The dress rehearsal is the capstone of our planning efforts.

Four years of consultations with data users and formal tests of alternative procedures and questionnaire content led up to the dress rehearsal. We consulted with a wide range of data users, including members of minority organizations, planners and academics, business leaders, representatives

of private organizations, state and local officials, and staff from Federal agencies. We have also kept members of Congress informed of 1990 census plans through 34 hearings beginning in 1984. Based on these consultative efforts and the test censuses, we designed a 1990 census plan that we are now implementing in the dress rehearsal.

We conducted the dress rehearsal in three sites representative of the kinds of enumeration conditions in which we will conduct the 1990 census. St. Louis, Missouri, is a large city with a high concentration of minorities, low-income persons, and multiunit housing. Fourteen counties in East Central Missouri contain one medium-size city (Columbia), a number of smaller cities and towns, rural areas, colleges, a major military base, and resort areas. Eight counties in eastern Washington contain some small cities and towns, but are composed largely of remote, sparsely populated areas. We also included the Colville and Spokane American Indian reservations--which border the eight counties--in the test site.

The dress rehearsal has proceeded smoothly. Data collection work has been completed, as has the review of census counts by local officials; our data processing continues on schedule. We have accomplished everything that we set out to do in this dry run for the 1990 census. We have, as expected, identified various refinements to operations and systems, but this is why we conduct tests and dress rehearsals.

In June 1987, we completed the award of a contract to the Digital Equipment Corporation for a "family of minicomputers." The first computers were delivered to support the dress rehearsal and the 1990 census "prelist", an address listing operation that I will discuss shortly. After the

delivery of the first minicomputers, we undertook accelerated development of software programs for the dress rehearsal and we established a special Systems Support Group to install and test the hardware. This we did successfully.

Data keying, editing, and address file updating were performed on the family of minicomputers in the dress rehearsal. We also used the minicomputers to complete the administrative functions for the district offices; these include payroll processing, assignment control, and cost and progress reporting. We are now in a position for timely implementation of reliable 1990 systems. All software will be tested before 1990. This testing will involve quality assurance procedures at Headquarters and further testing at the Columbia, Missouri, dress rehearsal site that we are keeping open just for this purpose. The Systems Support Group will distribute all 1990 software to our field and processing offices in a systematic fashion.

ADDRESS LIST COMPILATION

Two--address list compilation.

One of the major preparatory activities for the 1990 census is the compilation of an address list that we will use to control the delivery and return of questionnaires in 1990. We plan to enumerate 95 percent of the housing units by mail-back procedures. With these procedures, we compile an address list in advance of the census, mail or deliver a questionnaire to each address, and follow up on those addresses for which questionnaires are not returned. This way, we can complete most of the census by mail

and concentrate our resources on the hard-to-enumerate follow-up cases. The success of these procedures depends in large part on the compilation of an accurate address list before Census Day.

For the more urban areas of the country, we purchased 56 million addresses from commercial vendors under contracts awarded in February 1988. We have assigned geographic codes by computer to these addresses . In July 1988, we began our "prelist" operation. In this operation, enumerators systematically canvass and list addresses for the more suburban, small-town, and rural parts of the country, where lists either do not exist or cannot be assigned geographic codes by computer. The "prelist" will be conducted in two phases. The first phase, which is underway now and will be completed by the end of the year, will list 32 million addresses. The second phase, which we will conduct in the fall of 1989, will list another 11 million addresses.

Our experience shows that updates by census enumerators and postal workers are required to produce a complete and accurate address mailing list for the census. Thus, we have contracted with the U.S. Postal Service (USPS) to conduct several checks of the lists for completeness and accuracy. In addition, our staff will conduct checks. One of the USPS checks--the advance post office check--is underway now for the addresses we purchased from commercial vendors. Mail carriers are informing us of any addresses not on our list to which they deliver mail and we are adding the addresses to our list. The carriers are also correcting erroneous addresses and informing us if we have given them an address that does not exist. The addresses we are listing now in "prelist" will undergo the same type of advance post office check next spring.

Another check of the address list is the "precanvass" operation, an updating of the addresses in urban areas that we will conduct in 1989. Our enumerators will systematically canvass their assigned areas to look for addresses not on our list and to make corrections to the list. We expect that, when we are through with all our address-compilation operations, the list will contain an address for virtually every housing unit and group facility in the areas where we will conduct the census by mail.

Mail carriers will deliver unaddressed questionnaires to housing units not in mail-back areas--primarily the more remote, sparsely populated areas of the country. But we will ask householders to complete their questionnaires and hold them until an enumerator visits to pick them up. There is no precensus address list for these areas; the enumerator lists each address during his or her visits.

QUESTIONNAIRES AND SAMPLE DESIGN

Third--questionnaires and sample design.

OMB Review

On April 14 of this year, I reported to you on the questions we plan to ask in the 1990 census and on our plans for the sample design. Our plans were based on an agreement with the Office of Management and Budget (OMB) that will: (1) meet the statistical needs of the Nation, (2) comply with the goals established by the Paperwork Reduction Act, and (3) increase the usefulness of data collected and published by the Federal Government. On July 27, the OMB approved our final short- and long-form questionnaires reflecting the items I reported to you in April.

Questionnaire Printing

Questionnaire printing is one of our most important activities for the census. We cannot conduct the census without questionnaires. We will require 250 million questionnaires in all. Quantity is not our only concern. The printing must meet technical quality standards so that the questionnaires, when filmed, can be read by our optical scanning devices. 100 million addressed questionnaire packages--consisting of questionnaires, envelopes, instructions, and motivational inserts--will be produced.

The contracts for printing the questionnaire mailing packages are scheduled to be awarded in November 1988. To have enough time to prepare materials for the printer and to abide by the procurement schedule, we must have final questionnaire content by mid-October, 1988. The contracts for printing the other questionnaires (enumerator-administered, Spanish-language, and special-purpose questionnaires), which will have essentially the same content as the mailing package questionnaires, are scheduled to be awarded in January 1989 and printing of these is scheduled to begin then. Questionnaire printing will continue through February 1990.

Delays in the questionnaire printing process would push back other related preparatory activities and could mean that we would not be able to deliver census questionnaires to housing units as scheduled. Obviously, that would seriously jeopardize our ability to complete questionnaire mailout and enumeration activities as planned.

Sample Design

Last April, I reported to you that we were proposing a sample size of approximately 17.7 million housing units, with sampling rates varying in relation to geographical area.

We will have three sampling rates. We plan to implement a 1-in-2 sampling rate in governmental units with fewer than 2,500 people and on American Indian reservations and in Alaska Native villages with fewer than 2,500 American Indians and Alaska Natives, respectively. Governmental units include counties, incorporated places, and, in 11 states, minor civil divisions (primarily towns and townships). In Hawaii, we will use the 1-in-2 sampling rate in census designated places--areas we delineate with the help of local experts--with fewer than 2,500 persons.

We will implement a 1-in-8 sampling rate in census tracts and block numbering areas with a large number of housing units (except for those large census tracts or block numbering areas or the portions thereof that are located in governmental units with fewer than 2,500 persons or in areas where we do not take the census by mail). We will determine the size cutoff for "large" census tracts and block numbering areas after examining precensus address counts; we currently estimate that the size cut-off will be about 2,000 housing units. Census tracts and block numbering areas are statistical subdivisions of counties delineated by local committees in metropolitan areas and other populous counties and by state officials in other selected areas.

For all other areas, containing over half of the country's population, we will sample at a 1-in-6 rate. In addition, all group quarters--military barracks, college dormitories, and so on--will be sampled at this rate.

This design will meet our important goal of producing quality data for small areas and population subgroups including the elderly, low-income working persons, Blacks, Hispanics, Asians and Pacific Islanders, and American Indians and Alaska Natives.

SPACE FOR CENSUS OPERATIONS

Four--space for census operations.

In all, we will require 6 million square feet of space for temporary offices to manage 1990 census data collection and processing. These will include 13 regional census centers, 484 district offices that the regional census centers will manage, and 7 processing offices. The regional census centers and district offices are responsible for collecting the data. The processing offices convert the census questionnaires to computer-readable format so that we can produce data products.

The regional census centers are located in or near the same cities where we have our permanent regional offices, plus San Francisco. Twelve offices are occupied now. We have awarded a space contract for the San Francisco office, which is scheduled for occupancy next month.

The district offices will open on a staggered basis. For example, 118 of the offices will open in early 1989. We have begun space procurement for these offices.

Two of the processing offices are open now--those in Kansas City, Missouri and Baltimore, Maryland. We have awarded contracts for space for two others that are scheduled to open in early 1989--Jacksonville, Florida and San Diego, California. The other three will open later in 1989 in Albany, New York; Austin, Texas; and Jeffersonville, Indiana.

PLANNED IMPROVEMENTS IN THE COUNTS FOR THE 1990 CENSUS

Fifth--planned improvements in the counts for the 1990 census.

We have taken a number of steps to improve the efficiency and accuracy of the 1990 census. We are concentrating our energy, attention, and resources on these efforts to make the census better. We expect these steps to produce the most complete count ever. The improvements we plan to implement for the 1990 census fall into seven categories, and I will touch on them briefly.

Promotion, Outreach, and Publicity

In the area of promotion, outreach, and publicity, we are taking great strides. For the first time in any census, the Advertising Council has obtained the services of two minority-run ad agencies. These are the Mingo Group, which is producing ads for the Black population and Castor Spanish International, for Hispanics. They will help to better market the census to hard-to-enumerate sectors of the minority communities.

We have involved educational officials and consultants in planning the census education project materials, which will go to over 100,000 elementary and secondary schools nationwide. These materials will be available in Spanish as well as English. We are expanding our religious organizations project. On June 1 and on September 16, 1988, we met with leaders of the Congress of National Black Churches, other Black denominations, and Black fraternal orders. The Congress and the other leaders have offered their support and cooperation for the 1990 census. As Bishop John Hurst Adams, chairman of the Congress said: "So many things that affect the Black community depend on the census...that we must work together for the fullest and most accurate count in the 1990 census."

We also plan to increase professional staff for outreach to community organizations and local media outlets from about 250 in 1980 to 350 for 1990. Over half of them are already hired and we plan to have all on board by the end of the year.

Joint Participation Between Census Bureau and Local Officials

We are encouraging more joint participation between ourselves and localities. We have made improvements in the local review program, which gives 39,000 local officials an opportunity to review census counts while we can still take corrective action if a problem is found. One of these improvements is to offer training to local officials on how to participate in the program. The first round of training has been completed; we will conduct a second round next year.

We are meeting with mayors of more than 350 key cities to discuss mutual concerns about the 1990 census and possible joint efforts to assure as complete a count as possible of the cities' populations in 1990. We also plan a series of regional meetings with elected officials to encourage their support for the 1990 census. The first such meeting will be next month in Kansas City, Missouri.

We also have established a new American Indian Tribal and Alaska Native Village Liaison Program to improve the participation of American Indians and Alaska Natives in the 1990 census. The liaisons will carry out a variety of functions related to outreach, promotion, and recruitment.

Efforts to Encourage a High Mail-Return Rate

We have built into the census process several new ways to increase the mail-return rate. These include "reminder" postcards that we will mail to housing units in mail-census areas 2 days before Census Day; motivational inserts in the questionnaire mailing packages that list reasons to be counted in the census; and, in areas where we anticipate language difficulties, a multilingual motivational flyer in English, Spanish, and selected Asian languages. We also are expanding our questionnaire assistance efforts. For the first time, we will set up toll-free lines that are exclusively for persons who speak Spanish or Asian languages. These will be in addition to the English-language general toll-free numbers. We also will again provide questionnaires in Spanish to those who request them and enumerators will carry translations of the questionnaires in several languages.

Improvements in Census Procedures

We are improving address list compilation and questionnaire delivery procedures. We are introducing new procedures or improving 1980 procedures to make sure that the census address list--and, thus, the coverage of housing units in the census--is as complete as possible. This includes new listing procedures that will yield better apartment designations in multiunit structures in urban areas. We also are introducing new procedures to increase the likelihood that a household receives its census questionnaire. This includes direct delivery of questionnaires by census enumerators in some rural areas in the South and Midwest and in large public housing complexes in several large cities. These are areas where we have experienced problems with questionnaire delivery in past censuses. It also includes canvassing and enumeration door-to-door of areas with concentrations of boarded-up multiunit housing structures.

Enumerator Training, Pay, and Management

We are strengthening enumerator training, pay, and management. Enumerator training will be more interesting and relevant to the job. It will include learn-by-doing exercises and more training on map-reading, which has been a problem in the past. Supplemental pay will be given to enumerators who are productive, do good work, and complete their assignments on schedule.

We plan to tighten supervision by increasing the number of crew leaders, and thus reducing the ratio of enumerators to crew leaders. In 1980, the ratio was 1 crew leader to 12 or 13 enumerators; in 1990, we plan to have 1 crew leader for 8 enumerators. We will also require that the crew leaders review the enumerators' work daily.

We will need about 300,000 temporary employees in all types of offices at the peak of operations in April-May 1990. We know that it will be a challenge to recruit sufficient numbers of employees, particularly in areas with low unemployment and high wages. Reducing the high turnover experienced in previous censuses is a key goal. These efforts I have described should help us retain and motivate our workforce. In addition, we are exploring new means to recruit workers, including contacts with national and local organizations.

Automation Advances

We plan several important automation advances for the 1990 census that will move the census out of the paper and pencil world into the computer era. We will convert questionnaires to machine-readable form at least 3 months earlier than for 1980, which should make it possible to get data products

out sooner. A new automated address control file will contain 100 million addresses. This automated file will allow us to check-in questionnaires using high-speed laser sorters and minicomputers, instead of by hand, as in 1980. An automated management information system will track work progress and costs. And we will place 520 minicomputers in our regional census centers, district offices, and processing centers. The increased automation in the 1990 census will help us better control the whole census process, give us more and timelier status information, and allow more time for review.

Geography

We have implemented an automated geographic support system, called the Topologically Integrated Geographic Encoding and Referencing, or TIGER System. This system contains geographic information and maps in computer-readable form. It means better maps and consistency of geographic information in different files. The TIGER System produced all the maps for our address listing operations. When the TIGER System was first designed, many thought it would take 20 years before it would be ready to use. But our efforts made it a reality in only 6 years. On the way to this success, the U.S. Geological Survey aided us in an outstanding example of interagency cooperation. We expect the TIGER System will have many additional uses and users both now and in the future.

We also have increased the participation of the states, local governments, American Indian tribes, Alaska Natives, and officials in Puerto Rico, the U.S. Virgin Islands, and the Pacific Outlying Areas in delineating the boundaries of geographic areas. This will help assure that the data

tabulated for all the geographic areas in the 1990 census are accurate and useful.

FINAL THOUGHTS

Mr. Chairman, the 1990 census is underway. Taking a highly accurate census in a timely manner in such a complex and mobile society as ours is a big challenge. Your Census Bureau is ready to meet that challenge. With the solid foundation we have laid during the research and planning phase and with the motivation and dedication Census Bureau staff have demonstrated, I am confident that the 1990 census will be the best census ever.

Let me review our successful accomplishments:

(1) In 1987, we undertook and successully completed the largest computer procurement in our history. In all, we will purchase 550 minicomputers, most of these for the decennial census (520) and the rest for our economic and agriculture censuses and current surveys. With this procurement, the Census Bureau entered the Age of High-Tech.

(2) We have taken a giant step forward to make the 1990 census the most automated ever. As one example, with a computerized address file, we will place bar-codes on the questionnaires and read them by computer. This will prevent the serious backlogs in the questionnaire check-in operation that plagued us in 1980 and delayed field operations several weeks in some areas.

(3) One of the most far-reaching census activities has been the development of the TIGER System. In addition to being a vital component of a successful 1990 census, the TIGER System will benefit all Decennial, Economic, Agriculture, and Government Censuses and our current surveys. And we plan to make TIGER System products available to data users. These products will have great significance for inventory, environmental, social, health, education, and transportation planning. The TIGER System is an important national resource that will aid us for years to come.

(4) We have conducted the most successful dress rehearsal ever, accomplishing exactly what we set out to. More than 500,000 housing units and more than 1 million people were included in the dress rehearsal sites.

(5) Major census preparatory activities are underway and will be completed successfully. These include compilation of a list of 100,000,000 addresses, printing procurement for 250,000,000 questionnaires, and the acquisition of space for 13 regional, 484 district, and 7 processing offices.

(6) Finally, we have first-rate publicity and outreach plans to involve the American people. Through the assistance of the Advertising Council, we are developing a national publicity program with special efforts made to appeal to hard-to-enumerate groups. Especially impressive are the efforts planned for obtaining support from community organizations, churches, schools, private companies, and national, state, and local officals and organizations.

Mr. Chairman, with this Committee's continued support, together we can make the Bicentennial Census one that we all can take pride in. We appreciate your continued strong interest in plans for the 1990 census and look forward to your review as operations progress.

Mr. DYMALLY. Thank you very much, Dr. Keane.

You paint a very optimistic picture, and of course, I don't blame you, but the GAO raised some concerns having to do with pre-listing and hiring. I am particularly concerned about the hiring in terms of your inadequate compensation.

Do you care to comment about it? Does the Bureau have any say in that or is it a question of OPM setting those salaries?

Mr. KEANE. My first comment is an overall comment, Mr. Chairman. It is good to keep in mind that this dress rehearsal has been the best dress rehearsal ever. There are no major problems that are emerging here. This is as we hoped and as we planned.

So what we are doing now, after the dress rehearsal and while we continue to process the results, is to look at those areas where more work is directed, where perhaps a new look is needed in the sense of more flexibility.

On the hiring itself, we have put in the differential pay rates that I just mentioned in my testimony. Our outreach is far more massive and better planned. It is far more customized than ever before. By that, I mean that there is much more effort on a localized basis precisely where the difficult areas are in our hiring challenge.

So overall, we feel, not smug about our progress, but we feel we are on course as we approach the 1990 census.

Mr. DYMALLY. Are you going to hire welfare recipients?

Mr. KEANE. We couldn't get relief on ADC and so we were turned down by Health and Human Services. So I don't imagine we will be too appealing to them. If they qualify and they want to work for us, fine.

Mr. DYMALLY. One of the problems is that if they come to work for you, they lose their Medicaid.

Mr. KEANE. We tried to get an exception to that but failed.

Mr. DYMALLY. What about some legislation?

Mr. KEANE. We will follow whatever is legislated.

Mr. DYMALLY. Okay. You are a good follower, right? That is something we might want to explore. Give them an exemption for this census only. I think staff ought to explore that possibility. Your staff and our staff ought to explore that possibility. Maybe a couple lines on the CR might be one way to go about that, and confine it to the census. Since we are into workfare, and I understand an agreement has been reached on the welfare bill, and since we want to put them to work, it seems to me appropriate to give them that opportunity to work and make that exemption so they don't lose their Medicaid.

I wasn't supposed to say CR. We are not going to have a CR this year. So I withdraw that. Dream, dream, dream.

I understand you are going to get about $517 million next year, which is about $50 million below your anticipated budget. Do you think that is going to hurt you some or can you deal with that?

Mr. KEANE. Do I foresee problems with it? No, not in 1989. We will have to take another look at how we spend that money, but we will spend it well.

Mr. DYMALLY. If you are faced with similar cuts in 1990, do you have any contingency plans?

Mr. KEANE. A contingency budget will likely be discussed as part of the 1990 budget process.

Mr. DYMALLY. You originally planned to open 11 processing offices. Now you have cut it down to seven. Can you tell us why the change?

Mr. KEANE. In our planning, we looked at the span of control. That was one of the key influences in our decision to reduce the number to seven. When we took the second- and third-round look at it, our collective judgment was that we could do a better job if we had fewer offices. We weren't sure about the management and systems that we need, that we could do that 11 times. We feel much better about doing it seven times.

Mr. DYMALLY. The GAO has recommended that you develop a contingency plan. Is such a plan afoot in the event that something happens, budget cuts, computer problems, et cetera, et cetera, acts of nature?

Mr. KEANE. I think that is a worthwhile suggestion and we will pursue it.

Mr. DYMALLY. Okay.

As you conclude this hearing, and it is our last hearing, although I think we are going to be here until Christmas, how do you feel about the plans of the Bureau moving into next year and into 1990? Do you feel good about it?

Mr. KEANE. I feel good, especially about the following: I feel good about the early planning; I feel good about seven test censuses; I feel good about the enormous outreach at national, local, and State level; about outreach with the minority community; I feel good about the resources that have been made available to us; I feel good about the automation; I feel wonderful about the TIGER system, not just for this Decennial, but for potentially other Decennials and for our other censuses and programs and for the products at both the Geological Survey and the Census Bureau and likely others will develop as a result of that.

This is a tremendous technological breakthrough with real meaningful benefits for all concerned.

If you ask me, or you are thinking of asking me what do you worry about when you can't sleep at 2 a.m. in the morning because something is on your mind, these aren't major things, but they are recurring. I wonder somewhat about whether or not we will get enough good people to work well enough and long enough in 1990. The reason is that you don't know what the economy is going to be like in 1990. We don't know the unemployment rate, what it will be. We don't know in what areas, how high a proportion of the labor force will be women. We don't know necessarily how competitive our rates are because they vary greatly all over the country. That is one area.

Another area is—it is anecdotal and this is personal, but I think others share it, that the climate has deteriorated in this nation for taking censuses and surveys. How much it has deteriorated, none of us knows. When you leave the dress rehearsal and go to Broadway, that kicks in a different awareness in the country. That is the for-real census, and therefore, a lot of things work better than they do in test censuses or they do in the dress rehearsal.

Still in all, it seems to me that with the junk mail, with the junk phone calls and sometimes questionable door-to-door visit, this makes the kind of receptivity—this endangers the receptivity of the mail questionnaire and makes it more difficult, too, for the follow-up enumerators and, of course, the high proportion of people working, dual-career families, moonlighting at the high salaries that they are.

So I wonder about the climate for doing a census and a survey. Those are the two areas that I think about, Mr. Chairman.

Mr. DYMALLY. It appears that the minimum wage bill is probably dead in the Senate. What if—and I think it is going to pass next year—what if that becomes law, are you prepared to meet that minimum wage, given the fact that your salaries are so low now?

Mr. KEANE. You can't just name that contingency because there would be a host of other contingencies. As we have seen, it is apparently killed. If we planned a contingency for about every major thing that was suggested that might occur, we would have trouble getting on with the census-taking itself. It depends on, is a bill passed; if so, will it be $4.50 an hour; will it be $5.50 an hour; would it be something else?

Those are major, major concerns. What does happen in our thought is that if something is passed, it certainly would send the schedule of job remuneration for everything up. How much would be affected at the enumerator level versus other—the crew leader level versus supervisory position, other supervisory positions that we have to hire temporaries for, I don't know.

For sure, if a bill passed, as proposed, we would have to look at its implications after knowing what level of pay and when it is to be invoked and then deciding what it means for us.

Mr. DYMALLY. I am taking a chance by asking you these other questions about legislation, but let's go.

What if the Congress passes the undercount bill this year. Would you be prepared to implement it next year and the following year?

Mr. KEANE. That would be extraordinarily difficult. You know well our schedule of clearance of the questionnaire, of printing procurement, of starting the printing in January of next year. To introduce something like that at this stage would be a major, major change and we would have to review it at the time, what it calls for, the specifications of any kind of an adjustment would perhaps be just as important in that deliberation as adjustment mandated itself.

Pete, do you have anything to add to it?

Mr. BOUNPANE. No, Mr. Chairman, just to point out that we faced a similar problem in 1980 when some of the courts were close to saying adjust and we were at the time still trying to complete the census. If we are ordered to do it, of course we would do something. We would do the best we could under the circumstances. It may not be as good as people would like it to be, which would be the problem.

Mr. DYMALLY. Yesterday, with bipartisan support, the House passed the Asian-Pacific Islander bill by Congressman Matsui. Are you going to oppose it in the Senate? Are you going to ask the President to veto it if it passes?

Mr. KEANE. We are on record as—and we haven't changed our position—sticking with the proposed wording of the race questionnaire. As you well know from many hearings here and other meetings, and I—in May, spent a week in California to explain that to groups there, but I suppose it is not going to go away.

Mr. DYMALLY. Did you say something nice about me in California?

Mr. KEANE. Yes, I did.

Mr. DYMALLY. Good, thank you.

Mr. KEANE. Right after you did.

Mr. DYMALLY. The counting of the military personnel overseas is also on the floor. I anticipate some opposition from those people who want you not to count the undocumented residents. So let's do that in two parts.

If the Congress passes the military bill, would you have difficulty implementing that or are you working with DOD now?

Mr. KEANE. We are definitely working with DOD and there has been a continuing dialogue and planning, too. It is not just talking. We would implement that. If we had any fears, and there are certainly some reservations, it would be that it entailed costs that we haven't got money for and the administrative procedures would be so burdensome.

Remember, we really don't know how to do this at this level of magnitude.

Mr. DYMALLY. You did it during the Vietnam War.

Mr. KEANE. But at this level of magnitude.

Mr. BOUNPANE. Mr. Chairman, if I could add something to that. There is a major difference between what happened then and what is going on now and that is the laws for redistricting based on census numbers. We would have no problem implementing—taking the overseas military, counting them into one of the 50 States and using those numbers for reapportioning the House of Representatives. The difficulty comes with the States. We now have a State total that is different than the sum of the small parts that they use for redistricting.

Some States have indicated that they think that is a major problem because we are not able to allocate the military person to an individual address, only to one of the 50 States.

Mr. DYMALLY. But I thought that was going to be part of the census: you are going to get his or her address, his or her place of abode, his or her residence and that is what the purpose of the census is, isn't it?

Mr. BOUNPANE. If I understood right, for the military overseas, they aren't able to give that, only to give their home State.

Mr. DYMALLY. But the home State—one would have to assume that is his home address, right?

Mr. BOUNPANE. Yes, I understand, but at the State level only, not down to exactly what block they live in.

Mr. DYMALLY. Can't you ask that?

Mr. BOUNPANE. We could. It has been my understanding that for many of them, they don't——

Mr. DYMALLY. Oh, it is conceivable he may have given up——

Mr. BOUNPANE. Yes, they don't know really what the home address is.

Mr. DYMALLY. OK.

Mr. KEANE. As was pointed out in your Rockville, Maryland, hearing, some—you may not know as Pete points out, but others may know but choose to give another State.

Mr. DYMALLY. Yes. I mean, that is his choice. If he wants to select Nevada over Maryland, but you will have a problem in the census tract to be given to the legislatures, right?

So let's have it just float up in the air, then. Use it for statistical purposes. At least we will know how many people are in the United States and are residing overseas. It can't hurt.

Now, you left me with a very ambivalent statement. I have to go and extract the good things you say to use it on the floor today, but—all right, it is almost like reviewing a play. The play is good and the play is bad and you don't know which one to extract. Last one, there is still strong feeling on the part of some Members about not counting the undocumented. In fact, I anticipate that they are going to oppose the counting of military personnel, not on the merits of that, but on the politics of it. They are going to be saying today on the floor, "Well, if you're going to count the military, then you shouldn't count the undocumented."

What is your position on the counting of undocumented residents?

Mr. KEANE. That hasn't changed. We are counting, as we are directed to by the Constitution and the 1790 Census Law, to count all persons in the United States at their usual place of residence and that continues to be our controlling guideline.

Mr. DYMALLY. That is a beautiful quote for me today. That was very clear; I have no problems with that one.

Chairman Ford and I still have some problems about the outreach program. He believes that President Carter made a mistake by giving that piece to you. Are you prepared to recommend to the next President that the outreach program—that you be given some flexibility with the outreach program, rather than sticking it under OPM regulations? Hiring of the outreach programs, I am talking about.

You have it now. It was given to you by President Carter by default. It is the first time in the history of the United States——

Mr. KEANE. Are you talking about political referrals?

Mr. DYMALLY. Let's not use the word "political." Let's use the word——

Mr. KEANE. Referrals.

Mr. DYMALLY. Yes, outreach and community service.

Mr. KEANE. We are for obtaining as many legitimate candidates as possible from whatever source they may emerge for the 1990 census. You have heard of our needs, you have heard the GAO testify that there are some reservations in that agency about our ability to get those people. So our point, though, is that once they are in the system, then they should be evaluated and hired and so forth by the Census Bureau.

Mr. DYMALLY. Right, but President Carter, in his reform mode, gave that historic piece to you. It used to be that the Member could recommend somebody to your Bureau. Now they don't have that privilege.

My question is—and you told me in writing that the only person to change that is the President of the United States. So my question to you is are you prepared to recommend to the next President that he goes back to the old system?

Mr. KEANE. No.

Mr. DYMALLY. Why?

Mr. KEANE. Because I am looking at the merits—the advantages versus the disadvantages. It seems to me that the merits of not doing it outweigh the disadvantages.

Mr. DYMALLY. But the outreach program in 1980 wasn't as good as the outreach program in 1970 and 1960.

Mr. KEANE. The one in 1990 will be substantially better than 1980 and that is our focus, 1990, not the past.

Mr. DYMALLY. But I am not going to be around here until 2000 to change it.

Mr. KEANE. I am not going to be, either.

Mr. DYMALLY. All right.

We are still undecided. I think we have had some agreement on just about everything.

The final one is that I was in Jamaica during the recent disaster and the whole question arose of how many Caribbean folks we have here, and I was still fuzzy about our long negotiation of 18 months. I still don't know what you are going to do about—I know what you are going to do about the Asians and Hispanics and blacks, but as a national group, I don't know what you are going to do—how are we going to know how many West Indian folks we have in the United States?

Mr. BOUNPANE. Congressman, to the extent that they answer question 4, and indicate one of the islands, yes, we can tabulate that.

Mr. DYMALLY. So when I go up there—I am going up there Saturday to give a speech on the census—I keep doing work for you, great work for you—I just say to them, "OK, check number 4," right? When they ask me about it, I say, "Check number 4."

Mr. BOUNPANE. And to write in the appropriate island. That is very important.

Mr. DYMALLY. Okay. That is on the short form or the long form?

Mr. BOUNPANE. On both.

Mr. DYMALLY. On both, very good. All right.

Mr. BOUNPANE. It looks the same.

Mr. DYMALLY. Finally, I need the Bureau to make an appearance in Sacramento on Saturday the 15th. I need a rep at a conference, on a panel, dealing with the census, which I am supposed to appear on but we may very well be here, so I want to alert you. But in any case, you should be there. I will give you the details later. The 15th.

Mr. KEANE. Sure.

Mr. DYMALLY. Do you have an office in Sacramento?

Mr. KEANE. No.

Mr. DYMALLY. San Francisco?

Mr. KEANE. The closest permanent office is Los Angeles. There is a Regional Census Center in the plan for San Francisco.

Mr. DYMALLY. Nothing in San Francisco?

Mr. KEANE. No, the Regional Census Center. That is for the Decennial Census, but that is not a permanent office.

Mr. DYMALLY. But you do have an office in San Francisco?

Mr. KEANE. No.

Mr. DYMALLY. No? Very interesting. You mean to say Los Angeles has something that San Francisco doesn't have?

Mr. KEANE. You.

Mr. DYMALLY. Dr. Keane, I want to let you know that it has been a pleasure working with you in the last two years. I am going to miss you. I like our little friendly tete-a-tete, our little jostling every now and then. You take it in very good humor and very good spirit and you have done, in my judgment, an outstanding job with objectivity, without any political bias. We are certainly going to miss you and I am very, very pleased that this has been a very good experience for me in large measure because of you and your Bureau and your colleagues.

I wish you well in your future endeavors.

Mr. KEANE. Thank you, Mr. Chairman. I return the sentiments and I know that you will extend the same cordiality and support to my predecessor and to my colleagues.

Mr. DYMALLY. The meeting is adjourned.

[Whereupon, at 10:30 a.m., the subcommittee was adjourned, to reconvene subject to the call of the Chair.]

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